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DECLARATION IN SUPPORT OF AN APPLICATION FOR A PATENT OR  
PATENT OF ADDITION(a) Insert full  
name(s) of  
applicant(s).

In support of the Application made by (a) ROVER MOWERS (AUST.) PTY. LTD.

for a patent  
~~patent of addition~~ for an invention entitled:— (b)

SHREDDING MACHINE

19127/76

(b) Insert title  
of invention(c) Insert full  
name(s) of  
declarant(s).

I, (c) GEORG FRIEDRICH CHODZIESNER, Patent Attorney,

(d) Insert  
address(es)  
of declarant(s).

of (d) 1 Alfred Street, Sydney, New South Wales, 2000.

do solemnly and sincerely declare as follows:—

1. ~~I am the applicant for the~~ patent  
~~patent of addition~~(Or, in the case of an application by a body corporate,)(e) Insert name  
of body  
corporate.

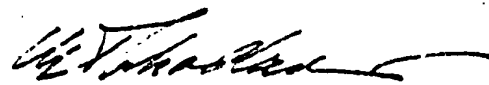
1. I am authorized by (e) ROVER MOWERS (AUST.) PTY. LTD.

the applicant for the patent  
~~patent of addition~~ to make this declaration on its behalf.2. ~~I am the actual inventor of the invention.~~(Or, where a person other than the inventor is the applicant,)(f) Insert full  
name(s) of  
actual  
inventor(s).

2. (f) DOUGLAS FLINDERS GREEN,

(g) Insert  
address(es) of  
actual  
inventor(s).of (g) 155 Fison Avenue, Eagle Farm, Brisbane, Queensland, 4007,  
Commonwealth of Australia.is the actual inventor of the invention and the facts upon which ~~the~~ Company(h) Set out how  
applicant(s)  
derive(s) title  
from actual  
inventor(s)  
i.e. assignee of  
the invention  
from the actual  
inventor(s).is entitled to make the application are as follows:— (h) The company is the  
assignee of the said invention from the said inventor

Declared at SYDNEY, this 30th day of OCTOBER, 1975.



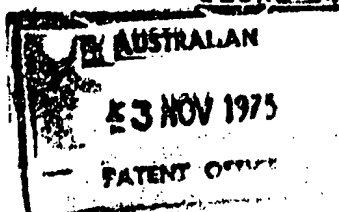
(Signature of Declarant)

GEORG FRIEDRICH CHODZIESNER.

To:

The Commissioner of Patents,  
COMMONWEALTH OF AUSTRALIAARTHUR S. CAVE & CO.  
PATENT AND TRADE MARK ATTORNEYS  
SYDNEY

A.S.C.-3





(11) AU-B 19127/76

(12) PATENT SPECIFICATION  
ABRIDGEMENT  
(19) AU

- |                   |   |         |      |         |
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| (21)              | 19127/76  | 499,085 | (22) | 3.11.75 |
| (23)              | 28.10.76  |         | (24) | 3.11.75 |
| (43)              | 4.5.78  |         | (44) | 5.4.79  |
| (51) <sup>2</sup> | B02C 18/10.   |         |      |         |
| (54)              | SHREDDING MACHINE.  |         |      |         |
| (71)              | ROVER MOWERS (AUST) PTY. LTD.   |         |      |         |
| (72)              | GREEN, D.F.   |         |      |         |
| (74)              | CA  |         |      |         |
| (56)              | 50205/69  | 451221  | 10.5 | 10.7    |
|                   | 66804/60  | 244492  | 10.5 | 10.7    |
| (57)              | CLAIM 1. A shredding machine comprising a base plate, an open bottom shredding chamber arranged above said base plate and closed thereby, said shredding chamber having spaced impact blades fixed to the inner wall thereof, a hopper mounted on the chamber communicating with the interior thereof and an outlet from the chamber, a motor mounted on the chamber and having its drive shaft projecting into said chamber, said drive shaft having cutting blades fixed thereon and rotatable within the chamber, said shredding chamber with said motor and said hopper being pivotally connected to said base for swinging movement in a vertical plane. |         |      |         |

AUSTRALIA

Form 10

PATENTS ACT 1952-1973

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE

Application Number:  
Lodged:

19127/76

Class

Int. Class

Complete Specification Lodged:  
Accepted:  
Published:

This document contains the  
attachments made under  
Section 49.

Priority:

Related Art:

and is of the nature of a

4 MAR 1979

499,085

TO BE COMPLETED BY APPLICANT

Name of Applicant:

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Actual Inventor:

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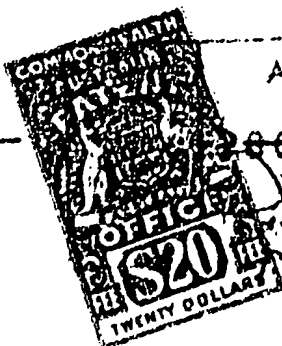
Complete Specification for the invention entitled

SHREDDING MACHINE

FEE STAMPS TO VALUE OF 2.55  
ATTACHED.

MAIL OFFICER

The following statement is a full description of this invention,  
including the best method of performing it known to me:-



This invention is concerned with shredding machines and whilst not limited thereto is particularly concerned with shredding machines for garden refuse such as lawn clippings, leaves, branches and the like.

5 Garden refuse is frequently bulky and difficult to dispose of, particularly in the case of leaves and shrub cuttings which in many cases are burnt with a consequent release to the atmosphere in built-up areas of combustion gases, smoke and ash which not only adds pollution to the environment,  
10 but is also inconvenient to persons in adjoining properties and increases the risk of bushfires in heavily timbered areas.

The present invention has been devised to provide a shredding machine which is of comparative light weight, mobile, easily cleaned and maintained and which reduces material introduced into the machine into fine particles which are discharged by the machine into a catcher associated therewith. The comminuted particles are then easily disposed of by transport to conventional garbage disposal areas or in the case where the machine is used to reduce garden refuse can be used as compost in gardens.

The invention resides in a shredding machine comprising a base plate, an open bottom shredding chamber arranged above said base plate and closed thereby, said shredding chamber having spaced impact blades fixed to the inner wall thereof, a  
25 hopper mounted on the chamber communicating with the interior thereof and an outlet from the chamber, a motor mounted on the chamber and having its drive shaft projecting into said chamber, said drive shaft having cutting blades fixed

thereon and rotatable within the chamber, said shredding chamber with said motor and said hopper being pivotally connected to said base for swinging movement in a vertical plane.

5 The invention will now be described with reference to one single embodiment in which

FIG. 1 is a side elevation showing details of a shredding machine in accordance with the invention;

FIG. 2 is a side elevation showing a shredding compartment pivotted in a vertical plane to a position above the base plate, and

FIG. 3 is a plan view showing the top of the shredder chamber.

Referring now to the drawings. The shredder comprises an open bottom shredder chamber designated generally by the reference 1 which includes a top plate 2, part cylindrical wall 3 and end plate 4 and bent shredding fingers or impact blades 4a. The open bottom of the chamber is closed by base plate 5.

The base plate 5 is rectangular in shape and has a front end 6, rear end 7 and sides 8. Marginal portions of the front, rear and sides are bent downwardly to form a downturned flange 9.

The sides 8 are provided with two spaced arms (not shown) on the underside thereof which support an axle 10 on which wheels 11 are rotatably mounted. Toward the rear end 7 of the base plate and on the underside thereof there is provided two spaced stand brackets 12, only one of which is illustrated in the drawings. The wheels and the stand brackets support the base in a horizontal position.

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5 The top plate 2 is rectangular in shape and has a front end 13, rear end 14 and sides 15 and 16. A marginal portion of the front end 13 and sides 15 and 16 are turned downwardly to form down-turned flange or skirt 17. The rear end 14 has a portion turned upwardly to form an upturned flange 18.

The wall 3 has a tangential side portion 19 and is secured to the underside of the top plate 2 with the tangential side parallel to the side 8 and extending to the rear end 7.

15 Two plates 21 and 22 are secured to the underside of the top plate 2. The plate 21 is spaced from the tangential side 19 to form with the base plate 5 a discharge outlet from the shredder chamber. The plate 22 is spaced from the side 8 and the end of the wall 3 is secured to the plate 22.

20 The inner portions of the plates 21 and 22 are formed into a plurality of spaced fingers or impact blades 23 which project into the shredder chamber. Additional bent shredding fingers 4a are secured to the inner periphery of the wall 3. The space between the plates 21 and 22 is closed by the end plate 4 which is sloped downwardly and inwardly to constitute a delivery chute leading to the shredder chamber.

25 The base plate 5 is provided with two arms 24 and 25 provided with holes which register with holes formed in the plates 21 and 22. Bolts 26 and 27 passing through the



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respective holes pivotally connect the shredder chamber to the base plate 5. The base plate 5 is provided with studs 28 and 29 which pass through holes in the top plate. The studs are so located as to be outside the shredder chamber so as not to obstruct material therein. The shredder chamber 1 is firmly secured to the base plate by nuts 30 screwed onto the threaded ends of the studs 28 and 29.

It will be apparent from the description so far that by releasing nuts 30 the shredder chamber may be conveniently pivotted upwardly to gain access to the interior of the chamber by cleaning and replacement of worn blades should the occasion arise.

The discharge outlet is provided with an extension member designated generally by the reference 31 which includes top wall 32 and side walls 33 and 34. The bottom of the extension member is left open and as will be apparent from the drawings the extension member constitutes a discharge chute leading from the shredder chamber. Means are provided on the discharge chute to secure a container to collect the shredded material delivered from the machine.

The top plate 2 is provided with an inlet to the shredder chamber and a hopper designated generally by the reference 35 having an elongated delivery trunk 36 is mounted on the top plate 2 and communicates with the shredder chamber through the inlet.

A handle comprising a "U"-shaped member 37 is secured to the top of the hopper 35 by each limb of the "U". The limbs of the "U" are turned upwardly as at 38 and the bight of

the "U" which extends across the front of the hopper forms a convenient handle whereby the machine may be manually tilted and moved from one location to another.

An upstanding guard 39 is secured to the top of the hopper to provide additional storage capacity for the hopper.

A motor 40 is secured to the top plate 2 and has its output shaft 41 projecting into the shredder chamber. A blade assembly designated generally by the reference 42 is fixed on the shaft 41 and rotates therewith. The spacing between the blades is so arranged that they pass between the spaces of the impact blades. The arrangement is such that the impact blades tend to hold material fed to the shredder chamber in the path of the rotating blades which material is shattered into small pieces as the machine is operated. Preferably the blade assembly is of the type disclosed in our co-pending application for patent No. <sup>18709/76.</sup>~~PG-3812~~ Although it will be appreciated that other types of blade assemblies may be used providing the arrangement is such as previously indicated.



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The claims defining the invention are as follows:

1. A shredding machine comprising a base plate, an open bottom shredding chamber arranged above said base plate and closed thereby, said shredding chamber having spaced impact blades fixed to the inner wall thereof, a hopper mounted on the chamber communicating with the interior thereof and an outlet from the chamber, a motor mounted on the chamber and having its drive shaft projecting into said chamber, said drive shaft having cutting blades fixed thereon and rotatable within the chamber, said shredding chamber with said motor and said hopper being pivotally connected to said base for swinging movement in a vertical plane.
2. A shredder as claimed in claim 1 wherein means are provided to releasably lock the shredder chamber to said base.
3. A shredder as claimed in claim 1 or 2 wherein the shredder blades are spaced parallel and are so positioned on said drive shaft, the spaced parallel blades pass through spaces between said impact blades.
4. A shredder as claimed in any one of claims 1 to 3 wherein the shredder chamber is formed of a top plate, a part cylindrical side wall and a sloped back wall spaced at one end from said side wall, said sloping back wall forming a delivery chute leading into said chamber and the space between said side wall and said back wall forming the outlet from said chamber.

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5. A shredder as claimed in any one of claims 1 to 4 wherein the base plate is supported at one end on spaced wheels and at the other end on stand brackets, the height of the brackets and the wheels being such as to support the shredder in a horizontal position.

6. A shredder as claimed in any one of claims 1 to 5 wherein the hopper has a handle secured thereto whereby the shredder may be manually tilted about its wheels to lift the stand brackets from the ground for the purpose of transporting the shredder.

7. A shredder substantially as hereinbefore described with reference to the accompanying drawings.

DATED this 30th day of NOVEMBER, 1978.

ROVER MOWERS (AUST) PTY. LTD.

By Its Patent Attorneys

ARTHUR S. CAVE & CO.



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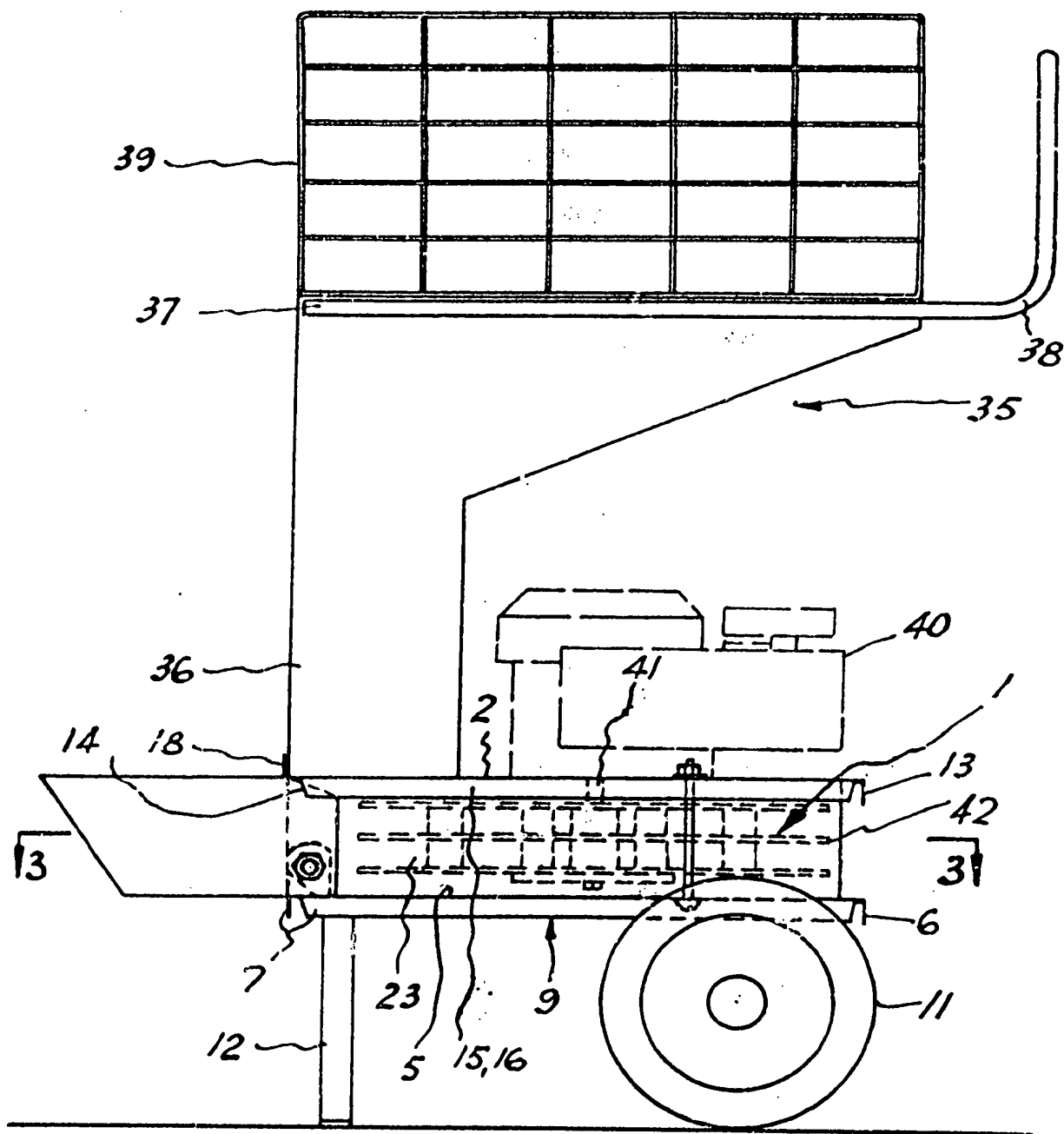


FIG. 1.

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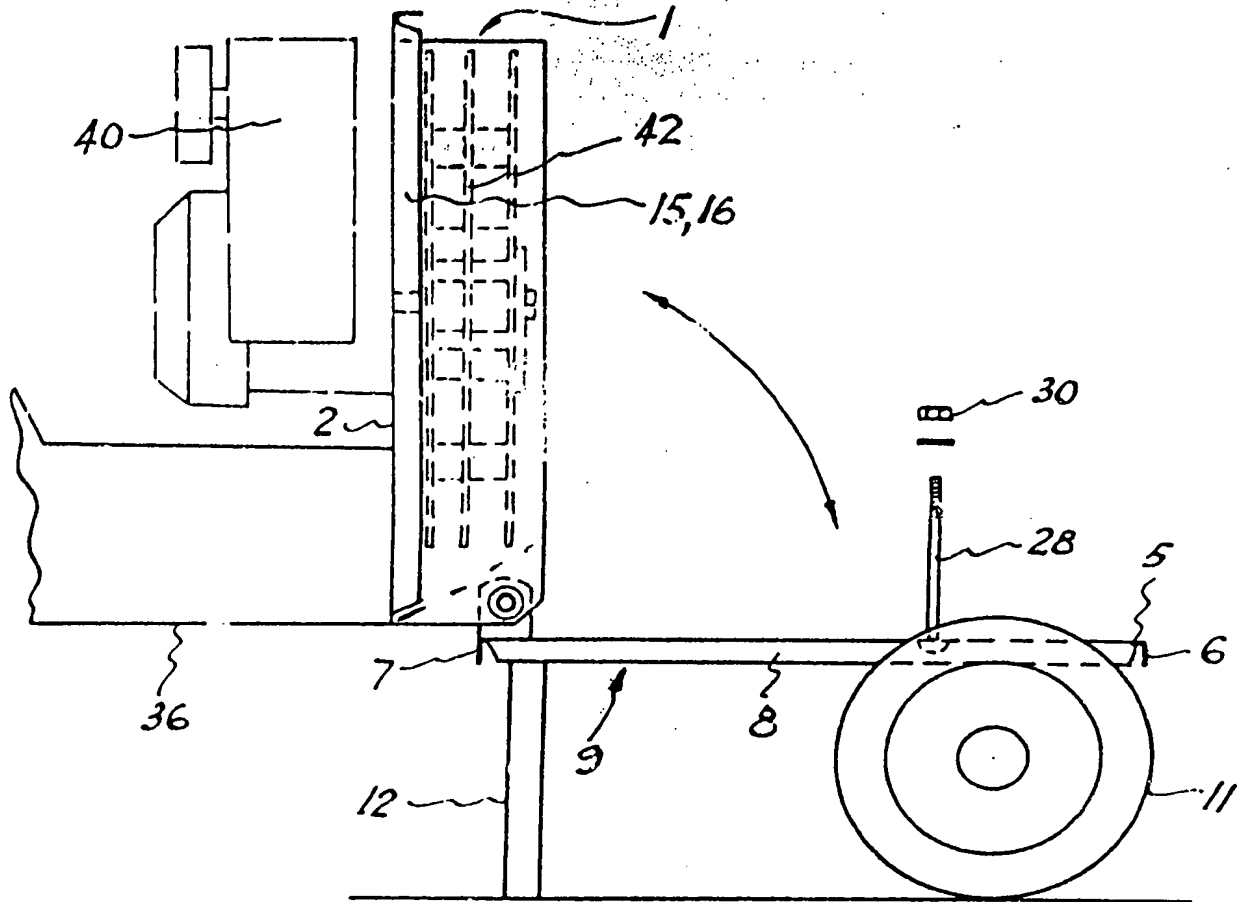


FIG. 2.

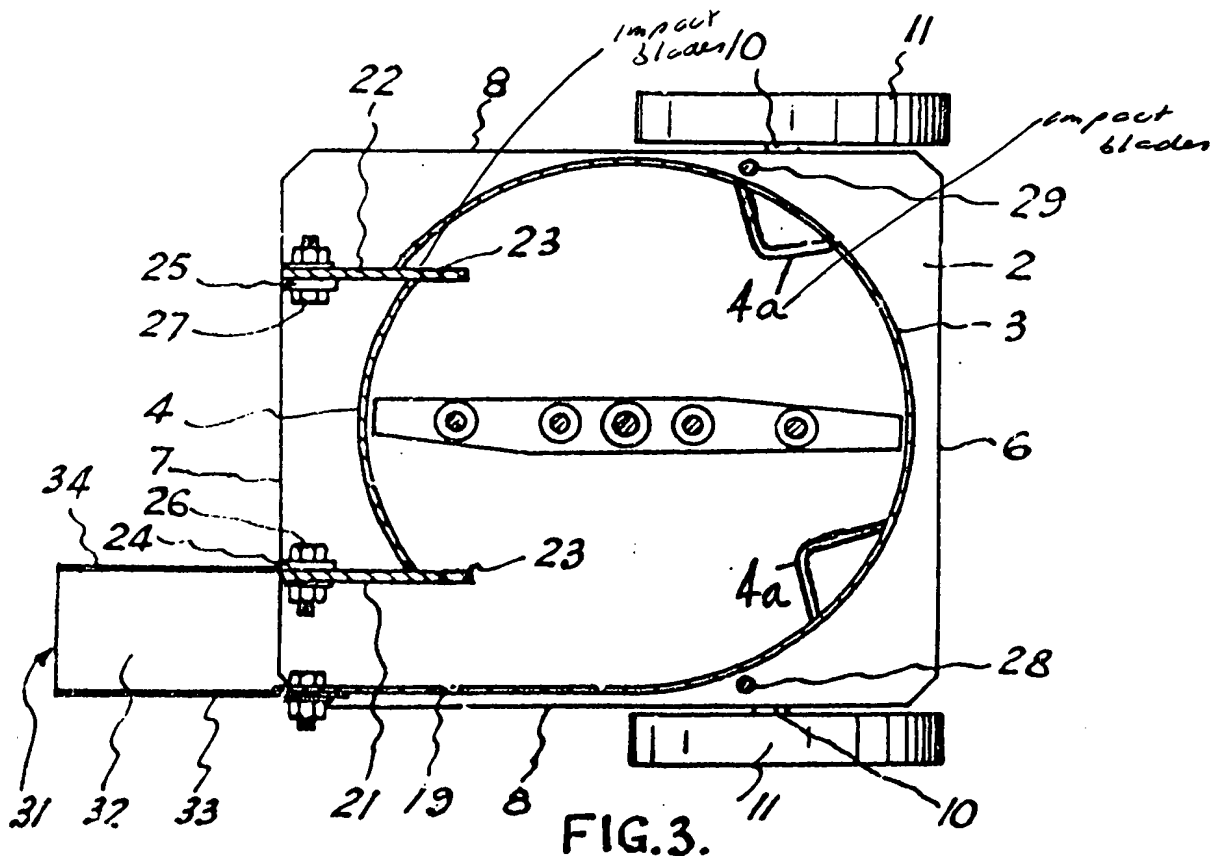


FIG. 3.